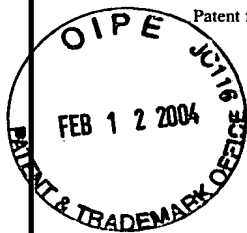


FEE TRANSMITTAL for FY 2004

Patent fees are subject to annual revision.



Complete if Known

Application Number	09/865,074
Confirmation Number	6704
Filing Date	May 24, 2001
First Named Inventor	Stephen Paul Zimmerman, et al.
Examiner Name	Thuy Tran Lien
Art Unit	1761
Attorney Docket No.	8094M

TOTAL AMOUNT OF PAYMENT (\$330.00)

METHOD OF PAYMENT

1. ☒ The Director is hereby authorized to charge indicated fees submitted on this form, credit any over payments, and charge any additional fee(s) during the pendency of this application to:

Deposit Account Number: **16-2480**

Deposit Account Name: **The Procter & Gamble Company**

FEE CALCULATION

1. BASIC FILING FEE - Large Entity

Code (\$)	Fee Description	Fee Paid
1001 770	Utility filing fee	<input type="checkbox"/>
1002 340	Design filing fee	<input type="checkbox"/>
1004 770	Reissue filing fee	<input type="checkbox"/>
1005 160	Provisional filing fee	<input type="checkbox"/>
SUBTOTAL (1)		(\$)[]

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE - Large Entity

		Extra Claims	Fee from Below	Fee Paid
Total Claims	<input type="checkbox"/> - 20** =	<input type="checkbox"/> x	<input type="checkbox"/>	= <input type="checkbox"/>
Independent Claims	<input type="checkbox"/> - 3** =	<input type="checkbox"/> x	<input type="checkbox"/>	= <input type="checkbox"/>
Multiple Dependent			<input type="checkbox"/>	= <input type="checkbox"/>

** or number previously paid, if greater; For Reissues, see below

Code (\$)	Fee Description
1202 18	Claims in excess of 20
1201 86	Independent claims in excess of 3
1203 290	Multiple dependent claim, if not paid
1204 86	**Reissue independent claims over original patent
1205 18	**Reissue claims in excess of 20 & over original patent

SUBTOTAL (2) (\$)[]

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Code (\$)	Fee Description	Fee Paid
1051 130	Surcharge-late filing fee or oath	<input type="checkbox"/>
1052 50	Surcharge-late provisional filing fee or cover sheet	<input type="checkbox"/>
1053 130	Non-English specification	<input type="checkbox"/>
1812 2,520	For filing a request for <i>ex parte</i> reexamination	<input type="checkbox"/>
1804 920*	Requesting publication of SIR prior to Examiner's action	<input type="checkbox"/>
1805 1,840*	Requesting publication of SIR after Examiner's action	<input type="checkbox"/>
1251 110	Extension for reply within 1 st month	<input type="checkbox"/>
1252 420	Extension for reply within 2 nd month	<input type="checkbox"/>
1253 950	Extension for reply within 3 rd month	<input type="checkbox"/>
1254 1,480	Extension for reply within 4 th month	<input type="checkbox"/>
1255 2,010	Extension for reply within 5 th month	<input type="checkbox"/>
1401 330	Notice of Appeal	<input type="checkbox"/>
1402 330	Filing a brief in support of an appeal	<input checked="" type="checkbox"/>
1403 290	Request for oral hearing	<input type="checkbox"/>
1451 1,510	Petition to institute a public use proceeding	<input type="checkbox"/>
1452 110	Petition to revive - unavoidable	<input type="checkbox"/>
1453 1,330	Petition to revive - unintentional	<input type="checkbox"/>
1501 1,330	Utility issue fee (or reissue)	<input type="checkbox"/>
1502 480	Design issue fee	<input type="checkbox"/>
1460 130	Petitions to the Commissioner	<input type="checkbox"/>
1807 50	Processing fee under 37 C.F.R. 1.17(q)	<input type="checkbox"/>
1806 180	Submission of Information Disclosure Statement	<input type="checkbox"/>
1809 770	Filing a submission after final rejection (37 CFR § 1.129(a))	<input type="checkbox"/>
1810 770	For each additional invention to be examined (37 CFR § 1.129(b))	<input type="checkbox"/>
1801 770	Request for Continued Examination (RCE)	<input type="checkbox"/>
1802 900	Request for expedited examination of a design application	<input type="checkbox"/>
1454 1330	Acceptance of unintentionally delayed claim for priority under 35 U.S.C. 119, 120, 121, or 365 (a) or (c)	<input type="checkbox"/>
Other fee (specify) _____		<input type="checkbox"/>
Other fee (specify) _____		<input type="checkbox"/>

* Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) [330]

SUBMITTED BY		Complete (if applicable)	
Name (Print/Type)	Melody A. Jones	Registration No. (Attorney/Agent)	44,175
Signature	<i>Melody A. Jones</i>	Telephone	(513) 634-6944
		Date	02/09/2004

This collection of information is required by 37 CFR 1.17. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon individual case. Any comments on the amount of time you are required to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on February 9, 2004.

Name of Attorney	Registration No.
Melody A. Jones	44,175
Signature of Attorney	

P&G Case 8094M

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of :
Stephen Paul Zimmerman, et al. : Confirmation No. 6704
Serial No. 09/865,074 : Group Art Unit 1761
Filed May 24, 2001 : Examiner Thuy Tran Lien

For TORTILLA CHIPS WITH CONTROLLED SURFACE BUBBLING

BRIEF ON APPEALS

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Enclosed, pursuant to 37 C.F.R. 1.192(a), is Appellant's brief on Appeal for the above application. The Brief is being forwarded in triplicate.

The fee for this Brief on Appeal is \$330.00 37 CFR 1.17(c).

The Director is hereby authorized to charge the above fee, or any additional fees that may be required, or credit any overpayment to Deposit Account No. 16-2480 in the name of The Procter & Gamble Company. A duplicate copy of this sheet is enclosed.

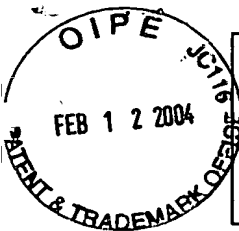
Respectfully submitted,

By Melody A. Jones
Melody A. Jones
Attorney or Agent for Applicant(s)
Registration No. 44,175
(513) 634-6944

Date: February 9, 2004

Customer No. 27752

(BriefonAppealTrans.doc)
(Last Revised 10/10/2003)



I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on February 9, 2004.

Name of Attorney: Melody A. Jones
Registration No.: 44,175
Signature of Attorney: *Melody A. Jones*

P&G Case 8094M

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of: :
Stephen Paul Zimmerman et al. : Confirmation No. 6704
Serial No.: 09/865,074 : Group Art Unit: 1761
Filed: May 24, 2001 : Examiner: Tran Lien, Thuy
For: TORTILLA CHIPS WITH CONTROLLED SURFACE BUBBLING

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 2233-1450

Dear Sir:

Applicants hereby appeal to the Board of Appeals the decision of the Examiner rejecting Claims 21-33. A response to the third rejection dated 9/5/03 was not filed.

Real Party in Interest:

The real party in interest is the Procter & Gamble Company, assignee of Appellants' entire right, title, and interest in the invention at issue.

Related Appeals and Interferences:

Appellants, Appellants' legal representative, and Appellants' assignee are not aware of any other appeals or interferences which will directly affect, or be directly affected by, or have a bearing on, the Board's decision in the pending appeal.

Status of Claims:

Claims 21-33 are pending in the case and are the subject of this appeal.

Status of Amendments:

No amendments have been filed subsequent to the rejection dated 9/5/03.

Summary of Invention:

02/17/2004 DTESSEM1 00000018 162480 09865074

01 FC:1402 330.00 DA

The present invention provides a snack chip made from a dough composition. The dough composition comprises from about 50% to about 80% of a blend comprising, (i) at least about 50% of a precooked starch-based material, and (ii) at least about 0.5% pregelatinized starch having very specific properties, as discussed *infra*. The dough composition also comprises from about 30% to about 60% total water. (Claim 21)

The resulting snack chip has a random, bubbly surface appearance and a crisp, dichotomous texture characteristic of a tortilla chip. (Specification, p. 11, lines 17-18) By careful control of the dough composition and specific raw material properties, it was surprisingly found that with the present invention, a tortilla style chip could be made without baking before frying. (Specification, p. 11, lines 15-17) In traditional tortilla making, however, the dough must be baked before it is fried to achieve the desired qualities. (Specification, p. 17, lines 3-12)

A key factor of the present invention is the required pregelatinized starch. The addition of the pregelatinized starch required by the present invention enables improved surface bubble development and texture expansion, and permits the omission of the baking step that is required by the traditional tortilla chip-making process. (Specification, p. 17, lines 18-21; *see* p. 17, lines 3-12 for a description of the traditional baking process and its purpose) The pregelatinized starch of the present invention is at least about 50% pregelatinized, has a peak viscosity of from about 1500 cp to about 4600 cp, a final viscosity of from about 300 cp to about 2700 cp, and a water absorption index ("WAI") of from about 12 to about 16. (Claim 21)

Issue:

Whether Claims 21-33 are patentable under 35 U.S.C. §103(a).

Grouping of Claims:

Claims 21-33 stand or fall together.

The Argument:

Claims 21-33 are patentable under 35 U.S.C. §103(a).

Claims 21-33 are rejected under 35 U.S.C. §103(a) as unpatentable over Willard [U.S. 4,623,548] in view of Holm [U.S. 4,994,295]. Independent claim 21, and claims 22-33 which are dependent therefrom, require, *inter alia*, pregelatinized starch that is at least about 50% pregelatinized, has a peak viscosity of from about 1500 cp to about 4600 cp, a final viscosity of from about 300 cp to about 2700 cp, and a water absorption index ("WAI") of from about 12 to about 16.

To establish a *prima facie* case of obviousness, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); MPEP §2143.03. Thus, in the present case, the Examiner must show that the art teaches or suggests a snack chip made from a dough comprising pregelatinized starch that is **at least about 50% pregelatinized**, has a **peak viscosity of from about 1500 cp to about 4600 cp**, a **final viscosity of from about 300 cp to about 2700 cp**, and a **water absorption index ("WAI") of from about 12 to about 16**. This the Examiner has not done. The Examiner has not identified any sections of Willard or Holm that teach or suggest a pregelatinized starch having the required characteristics. Thus, the obviousness rejection is improper and should be reversed.

Obviousness can only be established by modifying reference teachings to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. MPEP §2143; *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988; *In re Jones*, 958 F.2d 347, 21 USPQ2d 1491 (Fed. Cir. 1992). In the present case, the Examiner has not identified any teaching, suggestion, or motivation, or knowledge in the art that would motivate one to modify the references to make a snack from a dough comprising pregelatinized starch having the recited properties. Thus, the obviousness rejection is improper and should be reversed.

As disclosed in the Specification, by careful control of the dough composition and specific raw material properties, it was surprisingly found that with the present invention, a tortilla style chip could be made without baking before frying. (Specification, p. 11, lines 15-17) A key factor is the addition of the recited pregelatinized starch. The addition of this pregelatinized starch enables improved surface bubble development and texture expansion, and permits the omission of the baking step that is required by the traditional tortilla chip-making process. (Specification, p. 17, lines 18-21; *see* p. 17, lines 3-12 for a description of the traditional baking process and its purpose) The resulting snack chip has a random, bubbly surface appearance and a crisp, dichotomous texture characteristic of a tortilla chip (Specification, p. 11, lines 17-18) without being subjected to baking before frying.

Neither Holm nor Willard, however, recognize that % pregelatinization, viscosity, or WAI of pregelatinized starch are result-effective variables for making such a chip, and that the recited parameters enable the making of such a chip without baking before frying.

Rather, Holm teaches the production of controlled surface bubbling fabricated snack products by use of Holm's three-step process. This process involves formation of dough pieces or performs, drying of dough performs, and frying of dough performs. (Holm, Column 5, lines 6-9; Abstract) The purpose of drying is to produce a relatively dry chip surface with a relatively moist inner portion. (Holm, Column 7, lines 61-65) Drying can include methods such as heat (e.g., baking) and/or high volume air movement. (Holm, Columns 8-9) In discussing the selection of

process conditions, Holm notes the following "well-known relationship"; that "[i]ncreased surface drying usually results in increased (and heretofore undesired) bubbling." (Holm, Column 9, lines 51-62)

In contrast, the chip formulation of the current invention does not require "increased surface drying," as Holm suggests would be necessary, to result in a chip with the desired level of surface bubbling. Rather, the key variable in the present invention is the starch composition. The addition of the pregelled starch of the current invention enables improved surface bubble development and texture expansion, and also permits the omission of the baking step that is required by the traditional tortilla chip-making process. (Specification, p. 17, lines 18-21; *see* p. 17, lines 3-12 for a description of the traditional baking process and its purpose)

Although neither Holm nor Willard recognize the importance of using a pregelatinized starch having the recited % pregelatinization, viscosity, or WAI to make a bubbly chip that does not require a baking step before frying, the Examiner nonetheless concludes that the present invention would have been obvious in view of these references.

In discussing % pregelatinization, the Examiner seems to conclude that because no range is stated in Willard, all ranges are thus disclosed by Willard. The Examiner states:

While Willard does not disclose the percent of gelatinization of the pregelatinized starch, the degree of gelatinization of the pregelatinized starch can be from above 0-100% and **by not disclosing the percent gelatinization, the pregelatinized starch encompasses this range** and the claims include the range of 50-100%.
(9/5/03 Office Action, p. 2, *emphasis added*)

This does not explain why, in view of the fact that Willard does not recognize that different pregelatinized starches can have various degrees of gelatinization, and that Willard does not recognize that the degree of gelatinization of the pregelatinized starch is a result-effective variable for producing a bubbly snack that can be made without a baking step, one would nonetheless be motivated to formulate a snack chip comprising pregelatinized starch having the recited % gelatinization. Because the Examiner has provided no motivation to modify Willard to arrive at the recited % pregelatinization, the rejection is improper and should be reversed.

Similarly, the Examiner states that Willard does not disclose the viscosity of the pregelatinized starch. (9/5/03 Office Action, p. 2) The Examiner has concluded that starch viscosity is related to the degree of gelatinization, and by teaching pregelatinized starch:

It would have been within the skill of one in the art to have a degree of gelatinization which would give a viscosity that gives the most optimum working

parameters with respect to dough manipulation. Optimization is within the skill of one in the art. (9/5/03 Office Action, pp. 3-4)

This does not explain why, in view of the fact that Willard does not recognize that viscosity of the pregelatinized starch is a result-effective variable for producing a bubbly snack that can be made without a baking step, one would nonetheless be motivated to formulate a snack chip comprising pregelatinized starch having the recited viscosity parameters. The Examiner states that "optimization is within the skill of one in the art," but does not set forth any evidence that one skilled in the art would recognize that pregelatinized starch viscosity is a result-effective variable for producing a bubbly snack without baking. Thus, there has been shown no motivation to modify Willard to require any particular pregelatinized starch viscosity to arrive at the claimed invention. Accordingly, the rejection is improper and should be reversed.

As for WAI, the Examiner concludes that:

Willard discloses the same starch and the degree of gelatinization encompasses the claimed range; thus it is obvious the water absorption index of the starch can fall within the range claimed. In any event, it would have been obvious to one skilled in the art to use a starch having an WAI which would give the most optimum working parameters and properties. (9/5/03 Office Action, p. 4, *emphasis added*)

This does not explain why, in view of the fact that Willard does not recognize that WAI of the pregelatinized starch is a result-effective variable for producing a bubbly snack that can be made without a baking step, one would nonetheless be motivated to formulate a snack chip comprising pregelatinized starch having the recited WAI parameter. Furthermore, the Examiner provides no basis for concluding that Willard discloses the "same" starch, since Willard does not disclose the recited pregelatinized starch of the present invention.

The Examiner also states that it would have been obvious nonetheless to use a starch with the recited WAI to "give the most optimum working parameters and properties." Because the Examiner has not set forth any evidence that one skilled in the art would recognize that pregelatinized starch WAI is a result-effective variable for producing a bubbly snack without baking, this conclusion is improper. Thus, there has been shown no motivation to modify Willard to require any particular pregelatinized starch WAI to arrive at the claimed invention. Accordingly, the rejection is improper and should be reversed.

Moreover, because neither reference recognizes that the % pregelatinization, viscosity values, or WAI parameters of pregelatinized starch are result-effective for formulating a bubbly



snack that can be made without baking by frying, one would not reasonably expect that the claimed invention would result from modifying the references. Claims may be rejected only when there is a reasonable expectation of success that the claimed invention will result. See *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Thus, in this case, the rejection of the claims is improper and the rejection should be reversed.

There is nothing to indicate that any of the cited references contemplated making a bubbly snack that does not require baking before frying by formulating a snack comprising a pregelatinized starch having any particular % pregelatinization, viscosities, or WAI values, much less the values recited. In fact, Holm teaches away from the present invention. Holm teaches bubble control by process parameters (Holm, Column 1, lines 14-15), whereas the current invention relies upon composition parameters (pregelatinized starch properties). Thus, based on Holm, one would not be motivated to make a bubbly chip by modifying formulation, but rather by modifying process parameters. Furthermore, Holm teaches that increased surface drying usually results in increased bubbling (Holm, Column 9, lines 61-62), whereas the present invention does not require drying (e.g. baking) before frying. Thus, based upon Holm, one would not be motivated to make a bubbly chip by modifying the formulation, but rather by drying the surface of the dough.

The references do not teach or suggest the claimed invention, and there is no suggestion for modifying reference teachings to produce the claimed invention. Accordingly, the Examiner's rejection is improper and should be reversed.

Conclusion:

For the reasons set forth above, Appellants submit that the Examiner has not established the *prima facie* case of obviousness and that the present invention is patentable over the cited references. Accordingly, reversal of the Examiner's finding of unpatentability is respectfully requested.

Respectfully submitted,

For: Zimmerman et al.

By Melody A. Jones
Melody A. Jones
Attorney for Applicants
Reg. No. 44,175
(513) 634-6944

Date: February 9, 2004
Customer No. 27752

Appendix

[Claims 1-20 have been canceled.]

21. A snack chip, wherein said snack chip is made from a dough composition comprising:
 - a. from about 50% to about 80% of a blend comprising:
 - i. at least about 50% of a precooked starch-based material;
 - ii. at least about 0.5% pregelatinized starch, wherein said pregelatinized starch is at least about 50% pregelatinized, and further wherein said pregelatinized starch has a peak viscosity of from about 1500 cp to about 4600 cp; a final viscosity of from about 300 cp to about 2700 cp; and a water absorption index of from about 12 to about 16; and
 - b. from about 30% to about 60% total water.
22. The snack chip of Claim 21, wherein said blend comprises from about 40% to about 95% corn masa flour.
23. The snack chip of Claim 22, wherein said snack chip is uniformly shaped.
24. The snack chip of Claim 23, wherein said snack chip has raised surface features, wherein said raised surface features comprise:
 - a. from about 12% to about 40% large surface features;
 - b. from about 20% to about 40% medium surface features; and
 - c. from about 25% to about 60% small surface features.
25. The snack chip of Claim 24, wherein said snack chip has:
 - a. a glass transition temperature of from about 165 to about 275°F at a snack chip relative humidity of from about 2 to about 4%;
 - b. a glass transition temperature of from about 180 to about 275°F at a snack chip relative humidity of from about 6 to about 9%; and
 - c. a glass transition temperature of from about 150 to about 235°F at a snack chip relative humidity of from about 20 to about 30%.
26. The snack chip of Claim 25, wherein:
 - a. the average thickness of said snack chip is from about 1 mm to about 3 mm;
 - b. the average thickness of raised surface features is from about 2.3 mm to about 3.2 mm;

- c. the maximum thickness of the chip is less than about 5.5 mm; and
- d. the coefficient of variation of the chip thickness is greater than about 15%.

27. The snack chip of Claim 26, wherein the coefficient of variation of said snack chip thickness is from about 15% to about 40%.

28. The snack chip of Claim 27, wherein said snack chip comprises from about 5 to about 35 surface features per gram of snack chip.

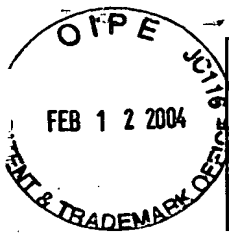
29. The snack chip of Claim 28, wherein said snack chip has a surface roughness of from about 1.5 to about 7 mm.

30. The snack chip of Claim 29, wherein said snack chip has a bubble wall thickness of greater than about 0.1 mm.

31. The snack chip of Claim 30, wherein said snack chip has a total volume occupied by solids greater than about 45%.

32. The snack piece of Claim 31, having interior voids with a length of from about 1 to about 12 mm, and a height of from about 0.2 to about 2.5 mm.

33. The snack chip of Claim 32, wherein said snack chip has a maximum thickness of from about 3 mm to about 5.5 mm.



I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Appeal Brief - Patents, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on February 2, 2004.

Melody A. Jones 44,175
Name of Attorney Registration No.
Signature of Attorney

P&G Case 8094M

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of: :
Stephen Paul Zimmerman et al. : Confirmation No. 6704
Serial No.: 09/865,074 : Group Art Unit: 1761
Filed: May 24, 2001 : Examiner: Tran Lien, Thuy
For: TORTILLA CHIPS WITH CONTROLLED SURFACE BUBBLING

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 2233-1450

Dear Sir:

Applicants hereby appeal to the Board of Appeals the decision of the Examiner rejecting Claims 21-33. A response to the third rejection dated 9/5/03 was not filed.

Real Party in Interest:

The real party in interest is the Procter & Gamble Company, assignee of Appellants' entire right, title, and interest in the invention at issue.

Related Appeals and Interferences:

Appellants, Appellants' legal representative, and Appellants' assignee are not aware of any other appeals or interferences which will directly affect, or be directly affected by, or have a bearing on, the Board's decision in the pending appeal.

Status of Claims:

Claims 21-33 are pending in the case and are the subject of this appeal.

Status of Amendments:

No amendments have been filed subsequent to the rejection dated 9/5/03.

Summary of Invention:

The present invention provides a snack chip made from a dough composition. The dough composition comprises from about 50% to about 80% of a blend comprising, (i) at least about 50% of a precooked starch-based material, and (ii) at least about 0.5% pregelatinized starch having very specific properties, as discussed *infra*. The dough composition also comprises from about 30% to about 60% total water. (Claim 21)

The resulting snack chip has a random, bubbly surface appearance and a crisp, dichotomous texture characteristic of a tortilla chip. (Specification, p. 11, lines 17-18) By careful control of the dough composition and specific raw material properties, it was surprisingly found that with the present invention, a tortilla style chip could be made without baking before frying. (Specification, p. 11, lines 15-17) In traditional tortilla making, however, the dough must be baked before it is fried to achieve the desired qualities. (Specification, p. 17, lines 3-12)

A key factor of the present invention is the required pregelatinized starch. The addition of the pregelatinized starch required by the present invention enables improved surface bubble development and texture expansion, and permits the omission of the baking step that is required by the traditional tortilla chip-making process. (Specification, p. 17, lines 18-21; *see* p. 17, lines 3-12 for a description of the traditional baking process and its purpose) The pregelatinized starch of the present invention is at least about 50% pregelatinized, has a peak viscosity of from about 1500 cp to about 4600 cp, a final viscosity of from about 300 cp to about 2700 cp, and a water absorption index ("WAI") of from about 12 to about 16. (Claim 21)

Issue:

Whether Claims 21-33 are patentable under 35 U.S.C. §103(a).

Grouping of Claims:

Claims 21-33 stand or fall together.

The Argument:

Claims 21-33 are patentable under 35 U.S.C. §103(a).

Claims 21-33 are rejected under 35 U.S.C. §103(a) as unpatentable over Willard [U.S. 4,623,548] in view of Holm [U.S. 4,994,295]. Independent claim 21, and claims 22-33 which are dependent therefrom, require, *inter alia*, pregelatinized starch that is at least about 50% pregelatinized, has a peak viscosity of from about 1500 cp to about 4600 cp, a final viscosity of from about 300 cp to about 2700 cp, and a water absorption index ("WAI") of from about 12 to about 16.

To establish a *prima facie* case of obviousness, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); MPEP §2143.03. Thus, in the present case, the Examiner must show that the art teaches or suggests a snack chip made from a dough comprising pregelatinized starch that is **at least about 50% pregelatinized**, has a **peak viscosity of from about 1500 cp to about 4600 cp**, a **final viscosity of from about 300 cp to about 2700 cp**, and a **water absorption index ("WAI") of from about 12 to about 16**. This the Examiner has not done. The Examiner has not identified any sections of Willard or Holm that teach or suggest a pregelatinized starch having the required characteristics. Thus, the obviousness rejection is improper and should be reversed.

Obviousness can only be established by modifying reference teachings to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. MPEP §2143; *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988; *In re Jones*, 958 F.2d 347, 21 USPQ2d 1491 (Fed. Cir. 1992). In the present case, the Examiner has not identified any teaching, suggestion, or motivation, or knowledge in the art that would motivate one to modify the references to make a snack from a dough comprising pregelatinized starch having the recited properties. Thus, the obviousness rejection is improper and should be reversed.

As disclosed in the Specification, by careful control of the dough composition and specific raw material properties, it was surprisingly found that with the present invention, a tortilla style chip could be made without baking before frying. (Specification, p. 11, lines 15-17) A key factor is the addition of the recited pregelatinized starch. The addition of this pregelatinized starch enables improved surface bubble development and texture expansion, and permits the omission of the baking step that is required by the traditional tortilla chip-making process. (Specification, p. 17, lines 18-21; *see* p. 17, lines 3-12 for a description of the traditional baking process and its purpose) The resulting snack chip has a random, bubbly surface appearance and a crisp, dichotomous texture characteristic of a tortilla chip (Specification, p. 11, lines 17-18) without being subjected to baking before frying.

Neither Holm nor Willard, however, recognize that % pregelatinization, viscosity, or WAI of pregelatinized starch are result-effective variables for making such a chip, and that the recited parameters enable the making of such a chip without baking before frying.

Rather, Holm teaches the production of controlled surface bubbling fabricated snack products by use of Holm's three-step process. This process involves formation of dough pieces or performs, drying of dough performs, and frying of dough performs. (Holm, Column 5, lines 6-9; Abstract) The purpose of drying is to produce a relatively dry chip surface with a relatively moist inner portion. (Holm, Column 7, lines 61-65) Drying can include methods such as heat (e.g., baking) and/or high volume air movement. (Holm, Columns 8-9) In discussing the selection of

process conditions, Holm notes the following "well-known relationship"; that "[i]ncreased surface drying usually results in increased (and heretofore undesired) bubbling." (Holm, Column 9, lines 51-62)

In contrast, the chip formulation of the current invention does not require "increased surface drying," as Holm suggests would be necessary, to result in a chip with the desired level of surface bubbling. Rather, the key variable in the present invention is the starch composition. The addition of the pregelled starch of the current invention enables improved surface bubble development and texture expansion, and also permits the omission of the baking step that is required by the traditional tortilla chip-making process. (Specification, p. 17, lines 18-21; *see* p. 17, lines 3-12 for a description of the traditional baking process and its purpose)

Although neither Holm nor Willard recognize the importance of using a pregelatinized starch having the recited % pregelatinization, viscosity, or WAI to make a bubbly chip that does not require a baking step before frying, the Examiner nonetheless concludes that the present invention would have been obvious in view of these references.

In discussing % pregelatinization, the Examiner seems to conclude that because no range is stated in Willard, all ranges are thus disclosed by Willard. The Examiner states:

While Willard does not disclose the percent of gelatinization of the pregelatinized starch, the degree of gelatinization of the pregelatinized starch can be from above 0-100% and **by not disclosing the percent gelatinization, the pregelatinized starch encompasses this range** and the claims include the range of 50-100%.

(9/5/03 Office Action, p. 2, *emphasis added*)

This does not explain why, in view of the fact that Willard does not recognize that different pregelatinized starches can have various degrees of gelatinization, and that Willard does not recognize that the degree of gelatinization of the pregelatinized starch is a result-effective variable for producing a bubbly snack that can be made without a baking step, one would nonetheless be motivated to formulate a snack chip comprising pregelatinized starch having the recited % gelatinization. Because the Examiner has provided no motivation to modify Willard to arrive at the recited % pregelatinization, the rejection is improper and should be reversed.

Similarly, the Examiner states that Willard does not disclose the viscosity of the pregelatinized starch. (9/5/03 Office Action, p. 2) The Examiner has concluded that starch viscosity is related to the degree of gelatinization, and by teaching pregelatinized starch:

It would have been within the skill of one in the art to have a degree of gelatinization which would give a viscosity that gives the most optimum working

parameters with respect to dough manipulation. Optimization is within the skill of one in the art. (9/5/03 Office Action, pp. 3-4)

This does not explain why, in view of the fact that Willard does not recognize that viscosity of the pregelatinized starch is a result-effective variable for producing a bubbly snack that can be made without a baking step, one would nonetheless be motivated to formulate a snack chip comprising pregelatinized starch having the recited viscosity parameters. The Examiner states that "optimization is within the skill of one in the art," but does not set forth any evidence that one skilled in the art would recognize that pregelatinized starch viscosity is a result-effective variable for producing a bubbly snack without baking. Thus, there has been shown no motivation to modify Willard to require any particular pregelatinized starch viscosity to arrive at the claimed invention. Accordingly, the rejection is improper and should be reversed.

As for WAI, the Examiner concludes that:

Willard discloses the same starch and the degree of gelatinization encompasses the claimed range; thus it is obvious the water absorption index of the starch can fall within the range claimed. In any event, it would have been obvious to one skilled in the art to use a starch having an WAI which would give the most optimum working parameters and properties. (9/5/03 Office Action, p. 4, *emphasis added*)

This does not explain why, in view of the fact that Willard does not recognize that WAI of the pregelatinized starch is a result-effective variable for producing a bubbly snack that can be made without a baking step, one would nonetheless be motivated to formulate a snack chip comprising pregelatinized starch having the recited WAI parameter. Furthermore, the Examiner provides no basis for concluding that Willard discloses the "same" starch, since Willard does not disclose the recited pregelatinized starch of the present invention.

The Examiner also states that it would have been obvious nonetheless to use a starch with the recited WAI to "give the most optimum working parameters and properties." Because the Examiner has not set forth any evidence that one skilled in the art would recognize that pregelatinized starch WAI is a result-effective variable for producing a bubbly snack without baking, this conclusion is improper. Thus, there has been shown no motivation to modify Willard to require any particular pregelatinized starch WAI to arrive at the claimed invention. Accordingly, the rejection is improper and should be reversed.

Moreover, because neither reference recognizes that the % pregelatinization, viscosity values, or WAI parameters of pregelatinized starch are result-effective for formulating a bubbly

snack that can be made without baking by frying, one would not reasonably expect that the claimed invention would result from modifying the references. Claims may be rejected only when there is a reasonable expectation of success that the claimed invention will result. See *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Thus, in this case, the rejection of the claims is improper and the rejection should be reversed.

There is nothing to indicate that any of the cited references contemplated making a bubbly snack that does not require baking before frying by formulating a snack comprising a pregelatinized starch having any particular % pregelatinization, viscosities, or WAI values, much less the values recited. In fact, Holm teaches away from the present invention. Holm teaches bubble control by process parameters (Holm, Column 1, lines 14-15), whereas the current invention relies upon composition parameters (pregelatinized starch properties). Thus, based on Holm, one would not be motivated to make a bubbly chip by modifying formulation, but rather by modifying process parameters. Furthermore, Holm teaches that increased surface drying usually results in increased bubbling (Holm, Column 9, lines 61-62), whereas the present invention does not require drying (e.g. baking) before frying. Thus, based upon Holm, one would not be motivated to make a bubbly chip by modifying the formulation, but rather by drying the surface of the dough.

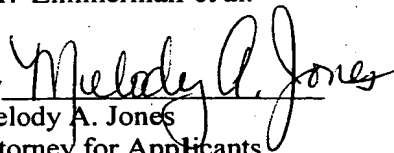
The references do not teach or suggest the claimed invention, and there is no suggestion for modifying reference teachings to produce the claimed invention. Accordingly, the Examiner's rejection is improper and should be reversed.

Conclusion:

For the reasons set forth above, Appellants submit that the Examiner has not established the *prima facie* case of obviousness and that the present invention is patentable over the cited references. Accordingly, reversal of the Examiner's finding of unpatentability is respectfully requested.

Respectfully submitted,

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Appendix

[Claims 1-20 have been canceled.]

21. A snack chip, wherein said snack chip is made from a dough composition comprising:
 - a. from about 50% to about 80% of a blend comprising:
 - i. at least about 50% of a precooked starch-based material;
 - ii. at least about 0.5% pregelatinized starch, wherein said pregelatinized starch is at least about 50% pregelatinized, and further wherein said pregelatinized starch has a peak viscosity of from about 1500 cp to about 4600 cp; a final viscosity of from about 300 cp to about 2700 cp; and a water absorption index of from about 12 to about 16; and
 - b. from about 30% to about 60% total water.
22. The snack chip of Claim 21, wherein said blend comprises from about 40% to about 95% corn masa flour.
23. The snack chip of Claim 22, wherein said snack chip is uniformly shaped.
24. The snack chip of Claim 23, wherein said snack chip has raised surface features, wherein said raised surface features comprise:
 - a. from about 12% to about 40% large surface features;
 - b. from about 20% to about 40% medium surface features; and
 - c. from about 25% to about 60% small surface features.
25. The snack chip of Claim 24, wherein said snack chip has:
 - a. a glass transition temperature of from about 165 to about 275°F at a snack chip relative humidity of from about 2 to about 4%;
 - b. a glass transition temperature of from about 180 to about 275°F at a snack chip relative humidity of from about 6 to about 9%; and
 - c. a glass transition temperature of from about 150 to about 235°F at a snack chip relative humidity of from about 20 to about 30%.
26. The snack chip of Claim 25, wherein:
 - a. the average thickness of said snack chip is from about 1 mm to about 3 mm;
 - b. the average thickness of raised surface features is from about 2.3 mm to about 3.2 mm;

- c. the maximum thickness of the chip is less than about 5.5 mm; and
- d. the coefficient of variation of the chip thickness is greater than about 15%.

27. The snack chip of Claim 26, wherein the coefficient of variation of said snack chip thickness is from about 15% to about 40%.

28. The snack chip of Claim 27, wherein said snack chip comprises from about 5 to about 35 surface features per gram of snack chip.

29. The snack chip of Claim 28, wherein said snack chip has a surface roughness of from about 1.5 to about 7 mm.

30. The snack chip of Claim 29, wherein said snack chip has a bubble wall thickness of greater than about 0.1 mm.

31. The snack chip of Claim 30, wherein said snack chip has a total volume occupied by solids greater than about 45%.

32. The snack piece of Claim 31, having interior voids with a length of from about 1 to about 12 mm, and a height of from about 0.2 to about 2.5 mm.

33. The snack chip of Claim 32, wherein said snack chip has a maximum thickness of from about 3 mm to about 5.5 mm.